Biol. Chem. Hoppe-Seyler, Vol. 376, pp. 747–752, December 1995 · Copyright © by Walter de Gruyter & Co · Berlin · New York

Contents
Biological Chemistry Hoppe-Seyler, Volume 376, 1995

Reviews

Behrendt, N., Rønne, E. and Danø, K.
The Structure and Function of the Urokinase Receptor, a Membrane Protein Governing Plasminogen Activation on the Cell Surface 269

Calkins, C.C. and Sloane, B.F.
Mammalian Cysteine Protease Inhibitors: Biochemical Properties and Possible Roles in Tumor Progression 71

Chao, J. and Chao, L.
Biochemistry, Regulation and Potential Function of Kallistatin 705

Conese, M. and Blasi, F.
Urokinase/Urokinase Receptor System: Internalization/Degradation of Urokinase-Serpin Complexes: Mechanism and Regulation 143

Freist, W. and Gauss, D.H.
Threonyl-tRNA Synthetase 213

Freist, W. and Gauss, D.H.
Lysyl-tRNA Synthetase 451

Kramer, M.D., Schaefer, B. and Reinartz, J.
Plasminogen Activation by Human Keratinocytes: Molecular Pathways and Cell-Biological Consequences 131

Kröncke, K.-D., Fehsel, K. and Kolb-Bachofen, V.
Inducible Nitric Oxide Synthase and Its Product Nitric Oxide, a Small Molecule with Complex Biological Activities 327

Künzler, P., Matsuo, K. and Schaffner, W.
Pathological, Physiological, and Evolutionary Aspects of Short Unstable DNA Repeats in the Human Genome 201

Molhuizen, H.O.F. and Schalkwijk, J.
Structural, Biochemical, and Cell Biological Aspects of the Serine Proteinase Inhibitor SKALP/Elafin/ESI 1

Pappot, H., Gårdsvoll, H., Rømer, J., Navrsted Pederson, A., Grøndahl-Hansen, J., Pyke, C. and Brünner, N.
Plasminogen Activator Inhibitor Type 1 in Cancer: Therapeutic and Prognostic Implications 259

Peltonen, L., Pekkarinen, P. and Aaltonen, J.
Messages from an Isolate: Lessons from the Finnish Gene Pool 697

Pötgens, A.J.G., Westphal, H.R., de Waal, R.M.W. and Ruiter, D.J.
The Role of Vascular Permeability Factor and Basic Fibroblast Growth Factor in Tumor Angiogenesis .. 57

Ries, C. and Petrides, P.E.
Cytokine Regulation of Matrix Metalloproteinase Activity and Its Regulatory Dysfunction in Disease . 345

Suzuki, K., Sorimachi, H., Yoshizawa, T., Kinbara, K. and Ishiura, S.
Calpain: Novel Family Members, Activation, and Physiological Function 523

Research Articles

Bravo, M.I., Cuchillo, C.M. and Nogués, M.V.
Identification of Human Nonpancreatic-Type Ribonuclease by Antibodies Obtained against a Synthetic Peptide 555

Brömme, D. and Okamoto, K.
Human Cathepsin O2, a Novel Cysteine Protease Highly Expressed in Osteoclastomas and Ovary: Molecular Cloning, Sequencing and Tissue Distribution 379

Brömme, D. and Okamoto, K.
The Baculovirus Cysteine Protease Has a Cathepsin B-like S2-Subsite Specificity 611

Cavarra, E., Santucci, A. and Lungarella, G.
Purification and N-Terminal Amino-Acid Sequence Analysis of Rabbit Neutrophil Cathepsin G 371

Dengler, R., Lottspeich, F., Oberthür, W., Mast, A.E. and Emmerich, B.
Limited Proteolysis of alpha$_1$-Proteinase Inhibitor (α_1-PI) in Acute Leukemia: Studies on the Resulting Fragments and Implication for the Structure of the Inactivated Inhibitor 165

Di Mascio, P., Hollnagel, H.C., Sperança, M. and Colepicolo, P.
Diurnal Rhythm of β-Carotene in Photosynthetic Alga *Gonyaulax polyedra* 297

Dostàlovà, Z., Calvete, J.J. and Töpfer-Petersen, E.
Interaction of Non-Aggregated Boar AWN-1 and AQN-3 with Phospholipid Matrices. A Model for Coating of Spermadhesins to the Sperm Surface 237

Endres, B., Würfel, A., Vogler, B. and Renz, P.
7-Azabenzimidazolylcobamide and 5,6-Dimethyl-7-Azabenzimidazolylcobamide, New Vitamin B_{12}-Analogs Synthesized from 4(5)-Aminoimidazole by *Eubacterium limosum* 595

Enßlin, M., Calvete, J.J., Thole, H.H., Sierralta, W.D., Adermann, K., Sanz, L. and Töpfer-Petersen, E.
Identification by Affinity Chromatography of Boar Sperm Membrane-Associated Proteins Bound to Immobilized Porcine Zona Pellucida. Mapping of the Phosphorylethanolamine-Binding Region of Spermadhesin AWN 733

Forsberg, M., Ström, A-C., Lillhager, P. and Westin, G.
Activation Functions of Transcription Factor Sp1 at U2 snRNA and TATA Box Promoters 661

Frenzel, J., Schellenberger, W. and Eschrich, K.
Bistability and Damped Oscillations in the Fructose 6-Phosphate/Fructose 1,6-Biphosphate Cycle in Cell-Free Extracts from Rat Liver 17

Friedebold, J., Mayer, F., Bill, E., Trautwein, A.X. and Bowien, B.
Structural and Immunological Studies on the Soluble Formate Dehydrogenase from *Alcaligenes eutrophus* 561

Griesser, J., Kaufmann, D., Eisenbarth, I., Bäuerle, C. and Krone, W.
Ras-GTP Regulation is not Altered in Cultured Melanocytes with Reduced Levels of Neurofibromin Derived from Patients with Neurofibromatosis 1 (NF-1) 91

Hayball, J.D., O'Hehir, R.E., Lamb, J.R. and Lake, R.A.
The Domain Structure and Functional Relationships in the Bacterial Superantigen, SEB 303

Herfurth, E. and Wittmann-Liebold, B.
Determination of Peptide Regions Exposed at the Surface of the Bacterial Ribosome with Antibodies against Synthetic Peptides 81

Hermann, A., Buchinger, P. and Rehbock, J.
Visualization of Tissue Kallikrein in Human Breast Carcinoma by Two-Dimensional Western Blotting and Immunohistochemistry 365

Hofmann, C., Sandig, V., Kirillova, I., Jennings, G., Rudolph, M., Schlag, P. and Strauss, M.
Hepatocyte-Specific Binding of L/S-HBV Particles Expressed in Insect Cells 173

Janciauskiene, S., Carlemalm, E. and Eriksson, S.
In Vitro Amyloid Fibril Formation from α_1-Antitrypsin 103

Janciauskiene, S., Carlemalm, E. and Eriksson, S.
In Vitro Fibril Formation from α_1-Antitrypsin-Derived C-Terminal Peptides 415

Jürgens, L., Kleineke, J., Brdiczka, D., Thinnes, F.P. and Hilschmann, N.
Localization of Type-1 Porin Channel (VDAC) in the Sarcoplasmatic Reticulum 685

Kaltschmidt, C., Kaltschmidt, B., Henkel, T., Stockinger, H. and Baeuerle, P.A.
Selective Recognition of the Activated Form of Transcription Factor NF-κB by a Monoclonal Antibody 9

Kiss, M., Wlaschek, M., Brenneisen, P., Michel, G., Hommel, C., Lange, T.S., Peus, D., Kemeny, L., Dobozy, A., Scharffetter-Kochanek, K. and Ruzicka, T.
α-Melanocyte Stimulating Hormone Induces Collagenase/Matrix Metalloproteinase-1 in Human Dermal Fibroblasts 425

Kolkenbrock, H., Orgel, D., Hecker-Kia, A., Zimmermann, J. and Ulbrich, N.
Generation and Activity of the Ternary Gelatinase B/TIMP-1/LMW-Stromelysin-1 Complex 495

Kontermann, R.E., Liu, Z., Schulze, R.A., Sommer, K.A., Queitsch, I., Dübel, S., Kipriyanov, S.M., Breitling, F. and Bautz, E.K.F.
Characterization of the Epitope Recognized by a Monoclonal Antibody Directed against the Largest Subunit of *Drosophila* RNA Polymerase II 473

Kos, J., Šmid, A., Krašovec, M., Svetic, B., Lenarčič, B., Vrhovec, I., Škrk, J. and Turk, V.
Lysosomal Proteases Cathepsins D, B, H, L and Their Inhibitors Stefins A and B in Head and Neck Cancer 401

Kremling, H., Nayernia, K., Nieter, S., Bunkowski, S. and Engel, W.
DNA-Protein Binding Studies in the 5′ Flanking Region of Rat Proacrosin Gene which Is Transcribed in Diploid Germ Cells 187

Kröncke, K.-D., Fehsel, K., Sommer, A., Rodriguez, M.-L. and Kolb-Bachofen, V.
Nitric Oxide Generation during Cellular Metabolization of the Diabetogenic N-Methyl-N-Nitroso-Urea Streptozotozin Contributes to Islet Cell DNA Damage 179

Lah, T.T., Calaf, G., Kalman, E., Shinde, B.G., Russo, J., Jarosz, D., Zabrecky, J., Somers, R. and Daskal, I.
Cathepsins D, B and L in Breast Carcinoma and in Transformed Human Breast Epithelial Cells (HBEC) 357

Ling, J., Li, X., Wu, X. and Liu, W.
Topological Requirements for Recognition and Cleavage of DNA by Ribosome-Inactivating Proteins 637

Löhrke, B., Franz, H., Brose, R. and Klein, M.
Alterations in the Visual Cortex Receptor Pattern by Operant Conditioning in a Reward Paradigm .. 483

Ludwig, P., Petrich, K., Schewe, T. and Diezel, W.
Inhibition of Eicosanoid Formation in Human Polymorphonuclear Leukocytes by High Concentrations of Magnesium Ions 739

Maiorino, M., Aumann, K-D., Brigelius-Flohé, R., Doria, D., Heuvel, J. van den, McCarthy, J., Roveri, A., Ursini, F. and Flohé, L.
Probing the Presumed Catalytic Triad of Selenium-Containing Peroxidases by Mutational Analysis of Phospholipid Hydroperoxide Glutathione Peroxidase (PHGPx) 651

Marin-Grez, M., Grigelat, C., Heinz-Erian, P., Heim, J.-M. and Klein, H.-G.
Atrial-Natriuretic-Peptide Receptors in Glomerular Cryosections of Renal Malignant and Spontaneously Hypertensive Rats 539

Matoušek, J., Trněná, L., Svoboda, P., Oriniaková, P. and Lichtenstein, C. P.
The Gradual Reduction of Viroid Levels in Hop Mericlones Following Heat Therapy: A Possible Role for a Nuclease Degrading dsRNA 715

Mücke, U., König, S. and Hübner, G.
Purification and Characterisation of Pyruvate Decarboxylase from Pea Seeds (*Pisum sativum* cv. Miko) 111

Murray, C. and Christeller, J.T.
Purification of a Trypsin Inhibitor (PFTI) from Pumpkin Fruit Phloem Exudate and Isolation of Putative Trypsin and Chymotrypsin Inhibitor cDNA Clones 281

Nakamura, K., Shigaki, Y. and Takaya, C.
Proteolysis of Tubulin Isotypes within *Tetrahymena* Axonemes 729

Palfner, K., Kneba, M., Hiddemann, W. and Bertram, J.
Improvement of Hammerhead Ribozymes Cleaving *mdr-1* mRNA 289

Pohlentz, G., Trimborn, M. and Egge, H.
n-Alkylglucosides Serve as Acceptors for Galactosyltransferases from Rat Liver Golgi Vesicles 501

Rettenberger, P., Wilhelm, O., Oi, H., Weidle, U.H., Goretzki, L., Koppitz, M., Lottspeich, F., König, B., Pessara, U., Kramer, M.D., Schmitt, M. and Magdolen, V.
A Competitive Chromogenic Assay to Study the Functional Interaction of Urokinase-Type Plasminogen Activator with Its Receptor 587

Roggentin, P., Kleineidam, R.G. and Schauer, R.
Diversity in the Properties of Two Sialidase Isoenzymes Produced by *Clostridium perfringens* spp. . 569

Rueda, R., Puente, R., Hueso, P., Maldonado, J. and Gil, A.
New Data on Content and Distribution of Gangliosides in Human Milk 723

Schauwecker, F., Wanner, G. and Kahmann, R.
Filament-Specific Expression of a Cellulase Gene in the Dimorphic Fungus *Ustilago maydis* 617

Schumann, C., Steinmetzer, T., Gothe, R., Hoppe, A., Paegelow, I., Liebmann, C., Fabry, M., Brandenburg, D. and Reissmann, S.
Potent Photoaffinity Labelled and Iodinated Antagonists of Bradykinin 33

Singer, G.A.M., Kleinschmidt, T. and Braunitzer, G.
The Primary Structure of the Hemoglobin from the Lobe-Lipped Bat (*Chalinolobus morio*, Microchiroptera) 603

Steinmetzer, T., Schumann, C., Paegelow, I., Liebmann, C., Glasmacher, D., Brandenburg, D. and Reissmann, S.
New Photoaffinity Labelled Agonists of Bradykinin 25

ten Lohuis, M., Galliano, H., Heidmann, I. and Meyer, P.
Treatment with Propionic and Butyric Acid Enhances Expression Variegation and Promoter Methylation in Plant Transgenes 311

Tseneklidou-Stoeter, D., Gerwig, G.J., Kamerling, J.P. and Spindler, K.-D.
Characterization of N-Linked Carbohydrate Chains of the Crayfish, *Astacus leptodactylus* Hemocyanin 531

Turk, B., Bieth, J.G., Björk, I., Dolenc, I., Turk, D., Cimerman, N., Kos, J., Čolič, A., Stoka, V. and Turk, V.
Regulation of the Activity of Lysosomal Cysteine Proteinases by pH-Induced Inactivation and/or Endogenous Protein Inhibitors, Cystatins 225

Ulbricht, B., Spiess, E., Schwartz-Albiez, R. and Ebert, W.
Quantification of Intracellular Cathepsin Activities in Human Lung Tumor Cell Lines by Flow Cytometry 407

Valentini, G., Iadarola, P., Ferri, G. and Speranza, M.L.
Affinity Labelling of the Catalytic and Allosteric ATP Binding Sites on Pyruvate Kinase Type I from *Escherichia coli* 231

Waldmann, T., Lupas, A., Kellermann, J., Peters, J. and Baumeister, W.
Primary Structure of the Thermosome from *Thermoplasma acidophilum* 119

Wang, X., Havsteen, B. and Hansen, H.
Evidence of the Coevolution of a Snake Toxin and Its Endogenous Antitoxin: Cloning, Sequence and Expression of a Serum Albumin cDNA of the Chinese Cobra 545

Watanabe, Y., Iwaki-Egawa, S., Mizukoshi, H. and Fujimoto, Y.
Identification of an Alanine Aminopeptidase in Human Maternal Serum as a Membrane-Bound Aminopeptidase N 397

Weiß, H.M., Palm, G.J. and Röhm, K-H.
Thermostable Aminoacylase from *Bacillus stearothermophilus*: Significance of the Metal Center for Catalysis and Protein Stability 643

Wennborg, A., Classon, M., Klein, G. and Gabain, A. von
Downregulation of c-*myc* Expression after Heat Shock in Human B-Cell Lines Is Independent of 5′ mRNA Sequences 671

Werle, B., Ebert, W., Klein, W. and Spiess, E.
Assessment of Cathepsin L Activity by Use of the Inhibitor CA-074 Compared to Cathepsin B Activity in Human Lung Tumor Tissue 157

Zhiri, A., Jaziri, M., Guo, Y., Vanhaelen-Fastré, R., Vanhaelen, M., Homès, J., Yoshimatsu, K. and Shimomura, K.
Tissue Cultures of *Taxus baccata* as a Source of 10-Deacetylbaccatin III, a Precursor for the Hemi-synthesis of Taxol 583

Short Communications

Bräuer, C., Hanes, J. and Scheit, K.H.
The Gene for the Major Protein (SVSP109) of Bovine Semen: Structure and Promoter Analysis 631

Diedrich, T. and Knepel, W.
Interaction of the Transcription Factor CREB with Pancreatic Islet Cell-Specific Enhancer Elements . 39

Dolinar, M., Barlič Maganja, D. and Turk, V.
Expression of Full-Length Human Procathepsin L cDNA in *Escherichia coli* and Refolding of the Expression Product 385

Eguchi, Y., Ikehara, T., Kayo, S., Eguchi, T. and Takei, H.
Amino Acid Sequence of the α- and β-Polypeptide Chains of Turkey *(Meleagris gallopavo)* Hemoglobin 437

Fukuchi, K., Tomoyasu, S., Watanabe, H., Kaetsu, S., Tsuruoka, N. and Gomi, K.
Iron Deprivation Results in an Increase in p53 Expression 627

Gjetting, T., Lukas, J., Bartek, J. and Strauss, M.
Regulated Expression of the Retinoblastoma Susceptibility Gene in Mammary Carcinoma Cells Restores Cyclin D1 Expression and G_1-Phase Control 441

Görlach, M., Meyer, H.E., Eisermann, B. and Soboll, S.
cAMP-Dependent Phosphorylation of Cytokeratin in Hepatic Inner Mitochondrial Membrane 51

Gramatikoff, K., Schaffner, W. and Georgiev, O.
The Leucine Zipper of c-Jun Binds to Ribosomal Protein L18a: A Role in Jun Protein Regulation? .. 321

Heymann, H., Breitmeier, D. and Günther, S.
Human Small Intestinal Sucrose-Isomaltase: Different Binding Patterns for Malto- and Isomal-tooligosaccharides 249

Hönlinger, A., Keil, P., Nelson, R.J., Craig, E.A. and Pfanner, N.
Posttranslational Mitochondrial Protein Import in a Homologous Yeast *In Vitro* System 515

Kim, Y., Adham, I.M., Haack, T., Kremling, H. and Engel, W.
Molecular Cloning and Characterization of the Bovine and Porcine Outer Dense Fibers cDNA and Organization of the Bovine Gene 431

Manjabacas, M.C., Valero, E., García-Moreno, M. and Varón, R.
Kinetic Analysis of an Autocatalytic Process Coupled to a Reversible Inhibition: The Inhibition of the System Trypsinogen-Trypsin by *p*-Amino-benzamidine 577

Naim, H.Y.
The Pro-Region of Human Intestinal Lactase-Phlorizin Hydrolase is Enzymatically Inactive towards Lactose 255

Ojeda, F., Folch, H., Guarda, M.I., Jastorff, B. and Diehl, H.A.
Induction of Apoptosis in Thymocytes: New Evidence for an Interaction of PKC and PKA Pathways 389

Perton, F.G., Baron, W., Scheffer, A.J. and Beintema, J.J.
Production and Characterization of Monoclonal Antibodies against *Panulirus interruptus* Hemocyanin 243

Peyman, A., Helsberg, M., Kretzschmar, G., Mag, M., Grabley, S. and Uhlmann, E.
Inhibition of Viral Growth by Antisense Oligo-nucleotides Directed against the IE110 and the UL30 mRNA of Herpes Simplex Virus Type-1 195

Stoffel, W. and Blau, R.
Rat and Human Glutamate Transporter GLAST1: Stable Heterologous Expression, Biochemical and Functional Characterization 511

Štrukelj, B., Pungerčar, J., Kopitar, G., Renko, M., Lenarčič, B., Berbić, S. and Turk, V.
Molecular Cloning and Identification of a Novel Porcine Cathelin-Like Antibacterial Peptide Precursor 507

Topp, H., Vangala, M., Kritzler, K. and Schöch, G.
Assessment of Lipid Peroxidation in Rats of Different Body Weight by Determining Expired Ethane 691

Tsiboli, P. and Choli, T.
Studies on S14 Protein from *Thermus thermophilus* Possessing Zinc Finger-Like Motifs 127

Varsányi, M. and Meyer, H.E.
Sarcoplasmic Reticular Ca^{2+} Release Channel Is Phosphorylated at Serine 2843 in Intact Rabbit Skeletal Muscle 45

Wang, Z., Rubin, H. and Schechter, N.M.
Production of Active Recombinant Human Chymase from a Construct Containing the Enterokinase Cleavage Site of Trypsinogen in Place of the Native Propeptide Sequence 681

Obituaries

Hengartner, H. and Secher, D.
Georges Jean Franz Köhler. April 17, 1946 – March 3, 1995 521

Karlson, P.
Adolf Butenandt. March 24, 1903 – January 18, 1995 395

Editorials

Fritz, H.-J.
Quantum Physics, Organic Chemistry and the Material Nature of Mutation – 60 Years Later 199

Noyer-Weidner, M. and Schaffner, W.
Felix Hoppe-Seyler (1825–1895) A Pioneer of Biochemistry and Molecular Biology 447

Guest Editorials

Perutz, M.
Hoppe-Seyler, Stokes and Haemoglobin 449

Pettersson, A.
Fishing the Nordic Gene Pool 695